```
=> fil reg
FILE 'REGISTRY' ENTERED AT 09:10:32 ON 05 JUL 2005
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Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:    4 JUL 2005  HIGHEST RN 853727-85-2
DICTIONARY FILE UPDATES:   4 JUL 2005  HIGHEST RN 853727-85-2

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

**********************************************************************
*                                                                    *
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added,    *
* effective March 20, 2005.  A new display format, IDERL, is now     *
* available and contains the CA role and document type information. *
*                                                                    *
**********************************************************************

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more
information enter HELP PROP at an arrow prompt in the file or refer
to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que l19
L9                STR
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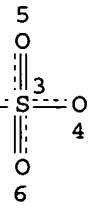


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NODE ATTRIBUTES:
CONNECT IS M1  RC AT   4
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   6

STEREO ATTRIBUTES: NONE
L12           414 SEA FILE=REGISTRY CSS FUL L9
L13               STR
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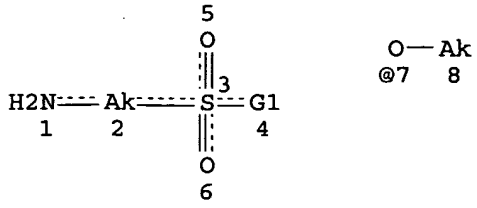
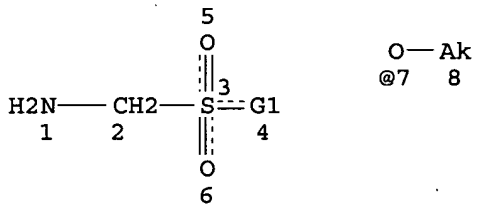


VAR G1=OH/7
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
L15 375 SEA FILE=REGISTRY SUB=L12 CSS FUL L13
L16 STR



VAR G1=OH/7
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 8

STEREO ATTRIBUTES: NONE
L17 22 SEA FILE=REGISTRY SUB=L15 CSS FUL L16
L18 12 SEA FILE=REGISTRY ABB=ON PLU=ON L17 AND (WITH OR CONJUGATE
OR PMS/CI OR NR>=1)
L19 10 SEA FILE=REGISTRY ABB=ON PLU=ON L17 NOT L18

=> d his

(FILE 'HOME' ENTERED AT 08:29:00 ON 05 JUL 2005)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 08:29:11 ON 05 JUL 2005
L1 1 S US20040058993/PN OR (US2003-601699# OR WO2001-JP11112 OR JP20
E AJINOMOTO/PA,CS
L2 9132 S E2-E4 OR AJINOMOTO?/PA,CS
E ISHIZAKI S/AU
L3 27 S E3,E4,E38
E SONOKO I/AU
E SONAKA I/AU

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L4            26 S E3,E4
                 E ICHIRO S/AU
                 E IINO Y/AU
L5            53 S E3,E29
                 E YUKIO I/AU
                 SEL RN L1

     FILE 'REGISTRY' ENTERED AT 08:31:56 ON 05 JUL 2005
L6             3 S E1-E3
L7               STR
L8             0 S L7 CSS
L9               STR L7
L10            0 S L9 CSS
L11            2 S L9
L12          414 S L9 CSS FUL
                 SAV L12 KWON6016/A
L13              STR L9
L14           22 S L13 CSS SAM SUB=L12
L15          375 S L13 CSS FUL SUB=L12
                 SAV L15 KWON6016A/A
L16              STR L13
L17           22 S L16 CSS FUL SUB=L15
                 SAV L17 KWON6016B/A
L18           12 S L17 AND (WITH OR CONJUGATE OR PMS/CI OR NR>=1)
L19           10 S L17 NOT L18
L20           48 S L12 AND ESTER
L21           33 S L20 NOT PMS/CI
L22           15 S L21 AND NR>=1
L23           18 S L21 NOT L22
                 SEL RN 7 8 13 14
L24           14 S L23 NOT E4-E7
L25          344 S L15 NOT L20
L26            1 S 107-35-7
L27          201 S 107-35-7/CRN
L28          159 S L25 NOT L26,L27
L29           16 S 56546-93-1 OR 56546-93-1/CRN
L30          143 S L28 NOT L29
L31            1 S 13881-91-9
L32           17 S 13881-91-9/CRN
L33            9 S L31,L32 NOT L19,L24
L34          125 S L30 NOT L31,L32
L35          117 S L34 NOT PMS/CI
L36          110 S L35 NOT (D OR T)/ELS
L37           34 S L36 AND NC>=2
L38           24 S L37 AND (NA OR CA OR LI OR K OR H3N OR AG)
L39           76 S L36 NOT L37
L40           70 S L39 NOT (11C# OR 13C# OR 14C# OR 35S# OR C11# OR C13# OR C14#
L41           69 S L40 NOT 15N

     FILE 'HCAPLUS' ENTERED AT 08:48:05 ON 05 JUL 2005
L42          874 S L19 OR L24 OR L38 OR L41
L43          158 S AMINOMETHANESULFONIC ACID
L44            1 S AMINOMETHANESULPHONIC ACID
L45           61 S AMINOMETHANESULFONATE OR AMINOMETHANESULPHONATE
L46          942 S L42-L45
L47            3 S L1-L5 AND L46
                 E TUMOR NECROSIS FACTOR/CT
                 E E4+ALL
                 E E2+ALL
L48        56749 S E3,E4,E2+NT
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L49       43523 S E22+OLD,NT,PFT,RT
L50       13013 S E2 (L) ALPHA
L51       43379 S TNF(L)ALPHA
L52       43641 S TUMOR NECROSIS FACTOR (L) ALPHA
                E TNF
L53        3838 S E34-E84,E92,E93
L54           4 S L46 AND L48-L53
                E LIVER/CT
L55      354152 S E3-E62
                E E3+ALL
L56      393704 S E3-E10
                E E18+ALL
L57       93411 S E10+OLD,NT
                E E62+ALL
L58        4105 S E6+OLD,NT
L59          18 S L46 AND L55-L58
L60          19 S L47,L54,L59
L61          15 S L60 NOT L54
                E HEPAT/CT
L62       17982 S E66+OLD,NT,PFT,RT
L63        1535 S E97+OLD,NT,PFT,RT
L64       10725 S E115+OLD,NT,PFT,RT
L65        9854 S E126+OLD,NT,PFT,RT
L66         813 S E145+OLD,NT,PFT,RT
L67         543 S E147+OLD,NT,PFT,RT
L68         599 S E148+OLD,NT,PFT,RT OR E149+OLD,NT,PFT,RT OR E150+OLD,NT,PFT,R
L69        8062 S E159+OLD,NT,PFT,RT
L70        1266 S E220+OLD,NT,PFT,RT
L71           2 S E228
L72      392374 S E229+OLD,NT,PFT,RT OR E231 OR E232+OLD,NT,PFT,RT
L73      355974 S E246+OLD,NT,PFT,RT OR E252+OLD,NT,PFT,RT
                E E241+ALL
L74        1698 S E2
L75          13 S L46 AND L62-L74
L76           1 S L75 NOT L60
L77          20 S L60,L75
L78          15 S L77 AND (PY<=2001 OR PRY<=2001 OR AY<=2001)
L79          17 S L47,L78
L80          17 S L79 AND L77
L81           3 S L77 NOT L80
                SEL HIT RN L80

     FILE 'REGISTRY' ENTERED AT 09:07:00 ON 05 JUL 2005
L82           4 S E1-E4
L83           1 S L82 AND CH5NO3S
L84           1 S L41 AND CH4NO3S
L85           0 S 7390-03-5/CRN
L86          10 S L19,L83,L84

     FILE 'HCAPLUS' ENTERED AT 09:09:45 ON 05 JUL 2005
L87         272 S L86
L88           7 S L87 AND L77
L89           7 S L88 AND L80

     FILE 'REGISTRY' ENTERED AT 09:10:32 ON 05 JUL 2005

=> d ide can tot l86

L86  ANSWER 1 OF 10  REGISTRY  COPYRIGHT 2005 ACS on STN
RN   95796-39-7  REGISTRY
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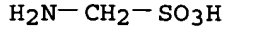
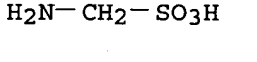
ED Entered STN: 13 Apr 1985
CN Methanesulfonic acid, amino-, monocesium salt (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Aminomethanesulfonic acid cesium salt
MF C H5 N O3 S . Cs
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL
CRN (13881-91-9)



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 102:149933

L86 ANSWER 2 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87994-03-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, monoammonium salt (9CI) (CA INDEX NAME)
MF C H5 N O3 S . H3 N
LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)



4 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 113:176616

REFERENCE 2: 105:211552

REFERENCE 3: 105:136850

REFERENCE 4: 99:222302

L86 ANSWER 3 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87994-02-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, barium salt (2:1) (9CI) (CA INDEX NAME)
MF C H5 N O3 S . 1/2 Ba
LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)

$H_2N-CH_2-SO_3H$

●1/2 Ba

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 99:222302

L86 ANSWER 4 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87994-01-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, strontium salt (2:1) (9CI) (CA INDEX NAME)
MF C H5 N O3 S . 1/2 Sr
LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)

$H_2N-CH_2-SO_3H$

●1/2 Sr

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 99:222302

L86 ANSWER 5 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87994-00-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, calcium salt (2:1) (9CI) (CA INDEX NAME)
MF C H5 N O3 S . 1/2 Ca
LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)

$H_2N-CH_2-SO_3H$

●1/2 Ca

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 99:222302

L86 ANSWER 6 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87993-99-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, monopotassium salt (9CI) (CA INDEX NAME)
MF C H5 N O3 S . K

LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)

$H_2N-CH_2-SO_3H$

● K

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 99:222302

L86 ANSWER 7 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 87993-98-4 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, monolithium salt (9CI) (CA INDEX NAME)
MF C H5 N O3 S . Li
LC STN Files: CA, CAPLUS, USPATFULL
CRN (13881-91-9)

$H_2N-CH_2-SO_3H$

● Li

4 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 111:193974

REFERENCE 2: 102:47270

REFERENCE 3: 101:172958

REFERENCE 4: 99:222302

L86 ANSWER 8 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 73900-03-5 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, ion(1-) (9CI) (CA INDEX NAME)
FS 3D CONCORD
MF **C H4 N O3 S**
CI COM
LC STN Files: BEILSTEIN*, CA, CAPLUS
(*File contains numerically searchable property data)

$H_2N-CH_2-SO_3^-$

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:158706

REFERENCE 2: 93:7278

L86 ANSWER 9 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN **13881-91-9** REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN (Aminomethyl)sulfonic acid
CN Aminomethanesulfonic acid
CN Aminomethanesulphonic acid
CN NSC 209983
FS 3D CONCORD
MF **C H5 N O3 S**
CI COM
LC STN Files: BEILSTEIN*, BIOSIS, BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DETHERM*, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, MEDLINE, PIRA, PROMT, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

$H_2N-CH_2-SO_3H$

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

242 REFERENCES IN FILE CA (1907 TO DATE)
21 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
242 REFERENCES IN FILE CAPLUS (1907 TO DATE)
6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 142:423793

REFERENCE 2: 142:320816

REFERENCE 3: 142:318170

REFERENCE 4: 142:100320

REFERENCE 5: 141:424260

REFERENCE 6: 141:278021

REFERENCE 7: 141:260629

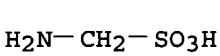
REFERENCE 8: 141:200129

REFERENCE 9: 140:363030

REFERENCE 10: 140:241653

L86 ANSWER 10 OF 10 REGISTRY COPYRIGHT 2005 ACS on STN
RN 6939-85-1 REGISTRY
ED Entered STN: 16 Nov 1984
CN Methanesulfonic acid, amino-, monosodium salt (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:
CN Methanesulfonic acid, amino-, sodium salt (6CI, 7CI)
OTHER NAMES:
CN Sodium aminomethanesulfonate
MF C H5 N O3 S . Na
LC STN Files: CA, CAOLD, CAPLUS, CASREACT, CHEMLIST, TOXCENTER, USPATFULL
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)
CRN (13881-91-9)



● Na

25 REFERENCES IN FILE CA (1907 TO DATE)
4 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
25 REFERENCES IN FILE CAPLUS (1907 TO DATE)
2 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 139:123343

REFERENCE 2: 133:367858

REFERENCE 3: 131:116703

REFERENCE 4: 124:255362

REFERENCE 5: 116:256053

REFERENCE 6: 114:256996

REFERENCE 7: 114:33160

REFERENCE 8: 113:211366

REFERENCE 9: 111:184102

REFERENCE 10: 105:211552

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 09:11:10 ON 05 JUL 2005
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
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FILE COVERS 1907 - 5 Jul 2005 VOL 143 ISS 2
FILE LAST UPDATED: 4 Jul 2005 (20050704/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all hitstr tot 189

L89 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:693707 HCAPLUS
DN 141:200129
ED Entered STN: 25 Aug 2004
TI The glycine analogue, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice
AU Ishizaki-Koizumi, Sonoko; **Sonaka, Ichiro**; Takei, Yoshiyuki; Ikejima, Kenichi; Sato, Nobuhiro
CS Pharmaceutical Research Laboratories, **AJINOMOTO** Co., Kawasaki-ku, Kawasaki, 210-8681, Japan
SO Biochemical and Biophysical Research Communications (2004), 322(2), 514-519
CODEN: BBRCA9; ISSN: 0006-291X
PB Elsevier
DT Journal
LA English
CC 1-12 (Pharmacology)
AB The activation of Kupffer cells represents a central mechanism of liver injury involving the production of **TNF**-α . It is known that glycine prevents LPS-induced production of **TNF**-**alpha.** in isolated Kupffer cells. In this study, the possibility that glycine analogs might affect Kupffer cells was investigated. As a result, **aminomethanesulfonic acid** (AMS) inhibited the production of **TNF**-α in LPS-stimulated Kupffer cells. Furthermore, LPS treatment caused a transient increase in intracellular calcium ([Ca2+]i) which was blunted by AMS. Thus, the addition of AMS is protective against the LPS-induced increase [Ca2+]i and subsequent production of **TNF**-α . Moreover, in vivo studies demonstrated that pretreatment of mice with AMS increased the rate of survival after injection with LPS/-gal and reduced the **TNF**-**alpha.** serum level and the mRNA level in the liver. These results indicate that intake of AMS attenuates the LPS-induced hepatotoxicity resulting from activation of Kupffer cells.
ST **aminomethanesulfonate** hepatoprotectant liver injury
IT Gene, animal
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**TNFA**; glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)
IT **Tumor necrosis factors**
mRNA
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)
IT Injury
(hepatic; glycine analog, **aminomethanesulfonic acid**

, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)

IT **Cytoprotective agents**
(**hepatoprotective**; glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts **hepatoprotective** effects in mice)

IT **Liver, disease**
(**injury**; glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat **Kupffer cells** and exerts hepatoprotective effects in mice)

IT 7440-70-2, Calcium, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)

IT 107-35-7, Taurine 107-97-1, Sarcosine 1118-68-9, Dimethylglycine **13881-91-9**, **Aminomethanesulfonic acid**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Bruck, R; Liver Int 2003, V23, P276 HCAPLUS
(2) Decker, K; Eur J Biochem 1990, V192, P245 HCAPLUS
(3) Dieter, P; J Hepatol 1988, V6, P23
(4) Dolmetsch, R; Nature 1997, V386, P855 HCAPLUS
(5) Enomoto, N; Alcohol Clin Exp Res 2003, V27, P2S HCAPLUS
(6) Gaillard, T; Pathobiology 1991, V59, P280 HCAPLUS
(7) Hewett, J; Am J Physiol 1993, V265, PG1011 HCAPLUS
(8) Iimuro, Y; Gastroenterology 1996, V110, P1536 MEDLINE
(9) Ikejima, K; Am J Physiol Gastrointest Liver Physiol 1996, V271, PG97 HCAPLUS
(10) Ikejima, K; Am J Physiol Gastrointest Liver Physiol 1997, V272, PG1581 HCAPLUS
(11) Kim, C; Immunopharmacology 1996, V34, P89 HCAPLUS
(12) Krause, K; J Clin Invest 1990, V85, P491 MEDLINE
(13) Lawson, J; Hepatology 1998, V28, P761 HCAPLUS
(14) Leist, M; Am J Pathol 1995, V146, P1220 HCAPLUS
(15) Lichtman, S; Am J Physiol 1996, V271, PG920 HCAPLUS
(16) Matsumoto, Y; Shock 2002, V17, P411
(17) Misra, U; J Leukoc Biol 1996, V60, P784 HCAPLUS
(18) Nolan, J; Hepatology 1981, V1, P458 MEDLINE
(19) Seabra, V; J Leukoc Biol 1998, V64, P615 HCAPLUS
(20) Tiegs, G; Biochem Pharmacol 1990, V40, P1317 HCAPLUS
(21) Villa, P; Mol Med 2004, V98, P199 HCAPLUS
(22) Watanabe, N; J Biochem 1996, V120, P1190 HCAPLUS
(23) Yee, S; Biochem Pharmacol Toxicol Sci 2003, V71, P124 HCAPLUS

IT **13881-91-9**, **Aminomethanesulfonic acid**
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(glycine analog, **aminomethanesulfonic acid**, inhibits LPS-induced production of **TNF**-α in isolated rat Kupffer cells and exerts hepatoprotective effects in mice)

RN 13881-91-9 HCAPLUS

CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-CH_2-SO_3H$

L89 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:76465 HCAPLUS
DN 140:122833
ED Entered STN: 30 Jan 2004
TI **Aminomethanesulfonate** derivatives as inhibitors of **TNF**-α formation for treatment of liver and other diseases
IN **Ishizaki, Sonoko**; Iino, Yukio; Fujita, Koichi
PA **Ajinomoto Co., Inc., Japan**
SO Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
IC ICM A61K031-145
ICS A61K031-4152; A61P001-00; A61P001-16; A61P001-18; A61P007-00; A61P009-10; A61P013-12; A61P019-02; A61P043-00
CC 1-12 (Pharmacology)
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004026716	A2	20040129	JP 2002-185134	20020625
PRAI JP 2002-185134		20020625		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2004026716	ICM	A61K031-145
	ICS	A61K031-4152; A61P001-00; A61P001-16; A61P001-18; A61P007-00; A61P009-10; A61P013-12; A61P019-02; A61P043-00
JP 2004026716	FTERM	4C086/AA01; 4C086/AA02; 4C086/BC36; 4C086/MA01; 4C086/MA04; 4C086/NA14; 4C086/ZA40; 4C086/ZA45; 4C086/ZA51; 4C086/ZA66; 4C086/ZA75; 4C086/ZA81; 4C086/ZA96; 4C086/ZC41; 4C206/AA01; 4C206/AA02; 4C206/JA08; 4C206/MA01; 4C206/MA04; 4C206/NA14; 4C206/ZA40; 4C206/ZA45; 4C206/ZA51; 4C206/ZA66; 4C206/ZA75; 4C206/ZA81; 4C206/ZA96; 4C206/ZC41

OS MARPAT 140:122833
AB **Aminomethanesulfonate** derivs. (I, R1N(R2)CH2SO3H wherein R1 = (substituted)fatty and aromatic ring hydrocarbons, (substituted)heterocyclic; R2 = H, (substituted)fatty hydrocarbon) and their pharmaceutically acceptable salts are claimed as inhibitors of **TNF-.alpha**. formation for treatment of liver and other diseases, including alc. hepatitis, viral hepatitis, fatty liver, hepatic fibrosis, liver cirrhosis, fulminant hepatitis, inflammatory bowel disease, pancreatitis, nephritis, arthritis, arteriosclerosis, septicemia, and ischemia-reperfusion injury.
ST **aminomethanesulfonate** deriv **TNFalpha** liver disease antiinflammatory
IT Inflammation
Pancreas, disease
(acute pancreatitis; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Hepatitis**
(alc.; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and

other diseases)
IT Anti-inflammatory agents
Antiarteriosclerotics
Antiarthritics
Arteriosclerosis
Arthritis
Cirrhosis
Liver, disease
Septicemia
(**aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Tumor necrosis factors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Liver, disease**
(**fatty**; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Liver, disease**
(**fibrosis**; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Hepatitis**
(fulminant; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Fibrosis
(hepatic; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Intestine, disease
(inflammatory; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Reperfusion
(injury; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Reperfusion
(ischemia injury; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Inflammation
Kidney, disease
(nephritis; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Injury
(reperfusion; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT Infection
(viral hepatitis; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **Hepatitis**
(viral; **aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)

IT 93-13-0 94-57-5 6375-10-6 **13881-91-9D**, **Aminomethanesulfonic acid**, derivs. 648909-35-7 648909-36-8
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
IT **13881-91-9D**, **Aminomethanesulfonic acid**, derivs.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**aminomethanesulfonate** derivs. as inhibitors of **TNF**-α formation for treatment of liver and other diseases)
RN 13881-91-9 HCAPLUS
CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-CH_2-SO_3H$

L89 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:736104 HCAPLUS
DN 137:257687
ED Entered STN: 27 Sep 2002
TI **TNF**α production inhibitors
IN **Ishizaki, Sonoko**; **Sonaka, Ichiro**; Iino, Yukio
PA **Ajinomoto Co., Inc., Japan**
SO PCT Int. Appl., 16 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
IC ICM A61K031-185
ICS A61K031-255; A61P043-00; A61P001-16
CC 1-12 (Pharmacology)
Section cross-reference(s): 63
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002074299	A1	20020926	WO 2001-JP11112	20011218 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1356810	A1	20031029	EP 2001-273986	20011218 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004058993	A1	20040325	US 2003-601699	20030624 <--
PRAI	JP 2000-397522	A	20001227 <--		
	WO 2001-JP11112	W	20011218 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002074299	ICM	A61K031-185
	ICS	A61K031-255; A61P043-00; A61P001-16

WO 2002074299 ECLA A61K031/185; A61K031/255 <--
EP 1356810 ECLA A61K031/185; A61K031/255 <--
US 2004058993 NCL 514/517.000; 514/553.000
ECLA A61K031/185; A61K031/255 <--

OS MARPAT 137:257687

AB Medicinal compns. containing **aminomethanesulfonic acid**, (I, H2NCH2SO3R where R = C1-6 alkyl) involving salts and esters thereof, as the active ingredient are offered. Because of being superior in the effect of inhibiting **TNFa** production to glycine having been proposed hitherto, these compns. are expected as useful as drugs for liver diseases. Moreover, utilization of the above active ingredients in drugs, a method of inhibiting **TNFa** production and, in particular, a method of treating, ameliorating and/or preventing liver diseases with the use of the above method are provided.

ST **TNFalpha** inhibitor **aminomethanesulfonate** deriv liver disease hepatoprotectant

IT **Liver, disease**
(**TNF**α production inhibitors)

IT **Tumor necrosis factors**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**TNF**α production inhibitors)

IT Drug delivery systems
(granules; **TNF**α production inhibitors)

IT **Cytoprotective agents**
(**hepatoprotective**; **TNF**α production inhibitors)

IT Drug delivery systems
(liqs.; **TNF**α production inhibitors)

IT Drug delivery systems
(powders; **TNF**α production inhibitors)

IT Drug delivery systems
(tablets; **TNF**α production inhibitors)

IT 9000-86-6, Alanine aminotransferase 9000-97-9, Aspartate aminotransferase
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**TNF**α production inhibitors)

IT **13881-91-9D**, **Aminomethanesulfonic acid**, salts and esters
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**TNF**α production inhibitors)

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD

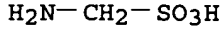
RE

(1) Lombardini, J; Biochem Pharmacol 1977, V26(12), P1175 HCAPLUS
(2) The Boots Company Plc; US 5807542 A 1995 HCAPLUS
(3) The Boots Company Plc; EP 730439 A1 1995 HCAPLUS
(4) The Boots Company Plc; WO 9514457 A1 1995 HCAPLUS

IT **13881-91-9D**, **Aminomethanesulfonic acid**, salts and esters
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**TNF**α production inhibitors)

RN 13881-91-9 HCAPLUS

CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L89 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2001:416971 HCAPLUS
DN 135:19916
ED Entered STN: 08 Jun 2001
TI Preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease
IN Han, Wei
PA Du Pont Pharmaceuticals Company, USA
SO PCT Int. Appl., 282 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM C07K005-02
CC 34-3 (Amino Acids, Peptides, and Proteins)
Section cross-reference(s): 1, 7, 15
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2001040262	A1	20010607	WO 2000-US32677	20001201	<--
	W: AU, BR, CA, CN, CZ, EE, HU, IL, IN, JP, KR, LT, LV, MX, NO, NZ, PL, RO, SG, SI, SK, UA, VN, ZA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM					
	RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR					
	CA 2390349	AA	20010607	CA 2000-2390349	20001201	<--
	US 2002123468	A1	20020905	US 2000-728653	20001201	<--
	US 6774212	B2	20040810			
	EP 1252178	A1	20021030	EP 2000-983845	20001201	<--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY, TR					
	JP 2003526634	T2	20030909	JP 2001-541017	20001201	<--
PRAI	US 1999-168998P	P	19991203	<--		
	WO 2000-US32677	W	20001201	<--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES	
WO 2001040262	ICM	C07K005-02	
WO 2001040262	ECLA	C07K005/02A; C07K007/02	<--
US 2002123468	NCL	530/331.000; 530/330.000	
	ECLA	C07K005/02A; C07K007/02	<--

OS MARPAT 135:19916
AB Keto amide and keto ester compds. R9-A6-A5-A4-A3-A2-NHCR1R2COCO-W-Q [W = NH or O; Q = substituted alkyl, alkenyl, or alkynyl or an amino acid residue; A2 is a bond, NHCH2CO which may be C-substituted, an amino acid residue, or NRCHRCO, where NRCHR represents tetrahydropyrrole-1,2-diyl which may be substituted at the 4- and 5-positions or hexahydroindole-1,2-diyl; A3 or A4 is a bond, NHCH2CO which may be C-substituted, or an amino acid residue; A5 or A6 is a bond or an amino acid residue; R1 = H, F, or substituted alkyl, alkenyl, alkynyl, aryl, or cycloalkyl; R2 = H, F, alkyl; R9 = S(O)R9a, SO2R9a, C(O)R9a, C(O)OR9a, C(O)NHR9a, alkyl-R9a, alkenyl-R9a, or alkynyl-R9a, where R9a = substituted alkyl, cycloalkyl, aryl, or heterocyclyl] or stereoisomeric forms or pharmaceutically acceptable salts were prepared as inhibitors of HCV NS3 protease. Thus, N-(2-pyrazinylcarbonyl)-L-leucyl-L-isoleucyl-3-cyclohexyl-L-alanyl-2-oxo-(3S)-3-aminopentanoylglycine was prepared by a multistep sequence which includes peptide coupling reactions in solution Compds. of the invention exhibit ki values of ≤60 μM, thereby confirming their utility as effective NS3 protease inhibitors.
ST peptide keto amide ester prepn inhibitor NS3 protease; hepatitis C virus protease inhibitor peptide keto amide
IT **Hepatitis C virus**

(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT Peptides, preparation
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT 342612-00-4P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT 319010-09-8P 342611-10-3P 342611-11-4P 342611-12-5P 342611-13-6P
342611-15-8P 342611-16-9P 342611-17-0P 342611-18-1P 342611-19-2P
342611-20-5P 342611-21-6P 342611-22-7P 342611-23-8P 342611-24-9P
342611-25-0P 342611-26-1P 342611-27-2P 342611-28-3P 342611-29-4P
342611-30-7P 342611-31-8P 342611-32-9P 342611-33-0P 342611-34-1P
342611-35-2P 342611-36-3P 342611-37-4P 342611-38-5P 342611-39-6P
342611-40-9P 342611-41-0P 342611-42-1P 342611-43-2P 342611-44-3P
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342612-52-6P 342612-54-8P 342612-56-0P 342612-59-3P 342621-42-5P
342621-43-6P 343256-95-1P 343256-96-2P
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT **149885-80-3**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT 59-66-5 61-90-5, L-Leucine, reactions 97-09-6 98-10-2, Benzenesulfonamide 98-64-6 98-97-5, 2-Pyrazinecarboxylic acid 402-46-0 421-85-2, Trifluoromethanesulfonamide 452-35-7 779-71-5 830-43-3 1205-30-7 1431-39-6 1524-40-9 1576-47-2, 2-Naphthalenesulfonamide 1954-92-3 2070-48-6 2295-56-9 3118-68-1

3119-02-6 3144-09-0, Methanesulfonamide 4336-70-3 4371-23-7,
4-Biphenylsulfonamide 4563-33-1, Benzenemethanesulfonamide 4793-24-2
5455-59-4 6325-93-5 6456-74-2 6949-23-1 6961-82-6 7720-45-8
13881-91-9, Aminomethanesulfonic acid
17260-71-8 19797-32-1 21506-01-4 23815-28-3 27527-05-5
29092-27-1 30058-40-3 31602-63-8, 5-(Aminomethyl)tetrazole
35337-99-6 39213-22-4 42918-86-5 51896-27-6 68252-72-2
88568-95-0 91569-33-4, [1,1'-Biphenyl]-3-sulfonamide 148992-43-2
190659-74-6 219138-72-4 253679-11-7 284680-64-4 300382-95-0
323197-73-5 342612-76-4 342612-77-5 342612-78-6 342612-79-7
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342612-90-2 342612-91-3 342612-92-4 342612-93-5 342612-94-6
342612-95-7 342612-96-8 342612-97-9 342612-98-0 342612-99-1
342613-02-9 342621-41-4
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

IT 50715-50-9P 58872-03-0P 99429-45-5P 106665-76-3P 188054-58-2P
274918-51-3P 319010-06-5P 319011-72-8P 319011-74-0P 319011-76-2P
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342612-70-8P 342612-71-9P 342612-72-0P 342612-73-1P 342612-74-2P
342612-82-2P 342612-83-3P 342612-84-4P 342612-85-5P 342612-86-6P
342613-00-7P 342613-01-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Akzo Nobel Nv; WO 9850420 A 1998 HCAPLUS
(2) Alkermes Inc; WO 9500535 A 1995 HCAPLUS
(3) Bailey, M; WO 9907734 A 1999 HCAPLUS
(4) Beecham Group Plc; EP 0445467 A 1991 HCAPLUS
(5) Boehringer Ingelheim Ca Ltd; WO 9829435 A 1998 HCAPLUS
(6) Cephalon Inc; WO 9917790 A 1999 HCAPLUS
(7) Deininger, D; WO 9817679 A 1998 HCAPLUS
(8) Georgia Tech Res Inst; WO 9212140 A 1992 HCAPLUS
(9) Zaidan Hojin Biseibutsu; EP 0423358 A 1991 HCAPLUS

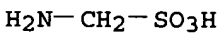
IT **149885-80-3**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

RN 149885-80-3 HCAPLUS
CN Proteinase, polyprotein-processing, NS3 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **13881-91-9, Aminomethanesulfonic acid**
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of α-keto amide inhibitors of hepatitis C virus NS3 protease)

RN 13881-91-9 HCAPLUS
CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



L89 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1995:780418 HCAPLUS
DN 123:208436
ED Entered STN: 08 Sep 1995
TI Compositions comprising iminium ion scavengers and/or nitrite scavengers
IN Challis, Brian Christopher; Trew, David Frank; Guthrie, Walter Graham; Roper, David Vincent
PA Boots Co. PLC, UK
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
DT Patent
LA English
IC ICM A61K007-00
ICS A61K031-19; A61K031-355; A61K031-375; A61K031-13; A61K031-12
CC 62-1 (Essential Oils and Cosmetics)
Section cross-reference(s): 63
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 9514457	A1	19950601	WO 1994-EP3264	19941003 <--
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, US, UZ				
RW: KE, MW, SD, SZ, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2176743	AA	19950601	CA 1994-2176743	19941003 <--
AU 9478110	A1	19950613	AU 1994-78110	19941003 <--
EP 730439	A1	19960911	EP 1994-928848	19941003 <--
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE				
ZA 9409380	A	19950816	ZA 1994-9380	19941125 <--
US 5807542	A	19980915	US 1996-649587	19960528 <--
PRAI GB 1993-24426	A	19931127 <--		
GB 1994-14886	A	19940723 <--		
WO 1994-EP3264	W	19941003 <--		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9514457	ICM	A61K007-00
	ICS	A61K031-19; A61K031-355; A61K031-375; A61K031-13; A61K031-12
WO 9514457	ECLA	A61K007/48C4F3; A61K007/48C4F2; A61K007/48C4D; A61K007/48C14M; A61K007/48C14F; A61K007/48C14K; A61K008/67H; A61K008/67L; A61K031/12; A61K031/19; A61K031/19+M; A61K031/34; A61K031/34+M; A61K031/35; A61K031/35+M; A61K031/355+M; A61K031/375+M; A61K031/66+M; A61K033/00+M <--
US 5807542	NCL	424/059.000; 424/073.000; 514/846.000; 514/847.000; 514/848.000
	ECLA	A61K007/48C4D; A61K007/48C4F2; A61K007/48C4F3; A61K007/48C14K; A61K007/48C14F; A61K007/48C14M; A61K008/67H; A61K008/67L; A61K031/12; A61K031/19; A61K031/19+M; A61K031/34; A61K031/34+M; A61K031/35; A61K031/35+M; A61K031/355+M; A61K031/375+M; A61K031/66+M; A61K033/00+M <--

AB Iminium ion scavengers are used in the invention to inhibit formation of N-nitrosamines, especially in cosmetics and pharmaceutical formulations. The iminium ion scavengers may be used in combination with nitrite ion scavengers such as ascorbate.

ST iminium nitrite ion scavenger cosmetic pharmaceutical
IT Cosmetics
Digestive tract
Nitrosation
Pharmaceutical dosage forms
Scavengers
(iminium and/or nitrite ion scavengers for cosmetics and pharmaceuticals)
IT Iminium compounds
Nitrites
RL: FMU (Formation, unclassified); REM (Removal or disposal); FORM (Formation, nonpreparative); PROC (Process)
(iminium and/or nitrite ion scavengers for cosmetics and pharmaceuticals)
IT Amines, formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(N-nitroso, iminium and/or nitrite ion scavengers for cosmetics and pharmaceuticals)
IT 50-81-7, Ascorbic acid, biological studies 52-51-7, Bronopol 59-02-9, α-Tocopherol 68-04-2, Trisodium citrate 77-92-9, Citric acid, biological studies 80-72-8, Reductic acid 89-65-6, Isoascorbic acid 109-00-2, 3-Hydroxypyridine 110-15-6, Succinic acid, biological studies 110-16-7, Maleic acid, biological studies 118-71-8, Maltol 120-80-9, Catechol, biological studies 121-79-9, n-Propyl gallate 123-31-9, Hydroquinone, biological studies 124-04-9, Adipic acid, biological studies 124-68-5, 2-Amino-2-methylpropanol 127-09-3, Sodium acetate 128-37-0, Butylated hydroxytoluene, biological studies 144-55-8, Sodium bicarbonate, biological studies 150-90-3, Disodium succinate 371-47-1, Disodium maleate 501-30-4, Kojic acid 540-72-7, Sodium thiocyanate 765-70-8, 3-Methyl-cyclopentane-1,2-dione 994-36-5, Sodium citrate 1066-33-7, Ammonium bicarbonate 3658-77-3 4839-46-7, 3,3-Dimethylglutaric acid 4940-11-8, Ethyl maltol 7486-38-6, Disodium adipate 7558-79-4, Disodium hydrogen phosphate 7681-82-5, Sodium iodide, biological studies 7789-23-3, Potassium fluoride **13881-91-9**, Aminomethylsulfonic acid 14114-09-1, 5-Methylreductic acid 25013-16-5, Butylated hydroxyanisole 29838-78-6 106579-53-7, Ascorbic acid 6-phosphate 107985-63-7, Disodium 3,3-dimethylglutarate 167973-55-9, Vitazyme C
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iminium and/or nitrite ion scavengers for cosmetics and pharmaceuticals)
IT **13881-91-9**, Aminomethylsulfonic acid
RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(iminium and/or nitrite ion scavengers for cosmetics and pharmaceuticals)
RN 13881-91-9 HCAPLUS
CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

$H_2N-CH_2-SO_3H$

L89 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1982:118013 HCAPLUS
DN 96:118013
ED Entered STN: 12 May 1984
TI Bile acid-CoA:amino acid N-acyltransferase

AU Killenberg, Paul G.
CS Dep. Med., Duke Univ., Durham, NC, 27710, USA
SO Methods in Enzymology (**1981**), 77(Detoxication Drug Metab.: Conjugation Relat. Syst.), 308-13
CODEN: MENZAU; ISSN: 0076-6879
DT Journal
LA English
CC 7-2 (Enzymes)
AB Bile acid-CoA:amino acid N-acyltransferase is purified from rat liver by a procedure that includes (NH4)2SO4 precipitation, chromatog. on CM-Sephadex, liquid (NH4)2SO4 fractionation, and rechromatog. on CM-Sephadex. The purified enzyme is active with CoA thioesters of cholate, lithocholate, chenodeoxycholate, and 3β-hydroxy-5-cholenoate. In the presence of bile acid-CoA, the apparent Km for taurine and **aminomethanesulfonate** is 1 mM; the apparent Km values for glycine and β-alanine are 30 and 200 mM, resp. Enzyme activity is maximal at pH 7.8-8.2. Assay methods are described.
ST bile acid CoA amino acid acyltransferase
IT **Liver, composition**
(bile acid-CoA amino acid acyltransferase of)
IT Michaelis constant
(of bile acid CoA amino acid acyltransferase)
IT 65979-40-0P
RL: PRP (Properties); PUR (Purification or recovery); BIOL (Biological study); PREP (Preparation)
(of liver, purification and properties of)
IT 56-40-6, reactions 107-35-7 107-95-9 **13881-91-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bile acid-CoA amino acid N-acyltransferase, kinetics of)
IT **13881-91-9**
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction of, with bile acid-CoA amino acid N-acyltransferase, kinetics of)
RN 13881-91-9 HCAPLUS
CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

L89 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 1977:546398 HCAPLUS
DN 87:146398
ED Entered STN: 12 May 1984
TI Inhibition of the synthesis of taurocholic acid by structural analogs of taurine
AU Lombardini, John B.
CS Sch. Med., Texas Tech Univ., Lubbock, TX, USA
SO Biochemical Pharmacology (**1977**), 26(12), 1175-7
CODEN: BCPCA6; ISSN: 0006-2952
DT Journal
LA English
CC 3-1 (Biochemical Interactions)
AB Isethionic acid [107-36-8] and **aminomethanesulfonic acid [13881-91-9]** were potent inhibitors of rat liver microsomal formation of taurocholic acid [81-24-3] from taurine [107-35-7] with 50% inhibitory concns. (I50) of 110 and 688μM resp. Hydroxypropanesulfonic

acid [15909-83-8] and aminoethanesulfuric acid [926-39-6] were less potent with I50 3125 and 3750μM resp. Hypotaurine [300-84-5] and glycine [56-40-6] decreased taurocholate formation at high concns. with I50 7500 and 8800μM resp.

ST taurine analog taurocholate microsome

IT **Liver, metabolism**
Microsome
(taurocholate formation by, taurine analogs effect on)

IT 81-24-3
RL: FORM (Formation, nonpreparative)
(formation of, by liver microsomes, taurine analogs effect on)

IT 107-35-7
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(metabolism of, by liver microsomes, structural analogs effect on)

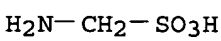
IT 56-40-6, biological studies
RL: BIOL (Biological study)
(taurocholate formation response to, in liver microsomes)

IT 107-36-8 300-84-5 926-39-6 **13881-91-9** 15909-83-8
RL: PRP (Properties)
(taurocholate formation response to, in liver microsomes)

IT **13881-91-9**
RL: PRP (Properties)
(taurocholate formation response to, in liver microsomes)

RN 13881-91-9 HCAPLUS

CN Methanesulfonic acid, amino- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)



=> => fil medline
FILE 'MEDLINE' ENTERED AT 09:22:25 ON 05 JUL 2005

FILE LAST UPDATED: 2 JUL 2005 (20050702/UP). FILE COVERS 1950 TO DATE.

On December 19, 2004, the 2005 MeSH terms were loaded.

The MEDLINE reload for 2005 is now available. For details enter HELP RLOAD at an arrow promt (=>). See also:

http://www.nlm.nih.gov/mesh/
http://www.nlm.nih.gov/pubs/techbull/nd04/nd04_mesh.html

OLDMEDLINE now back to 1950.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2005 vocabulary.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all tot l96

L96 ANSWER 1 OF 2 MEDLINE on STN
AN 2004418513 MEDLINE
DN PubMed ID: 15325260
TI The glycine analogue, **aminomethanesulfonic acid**,

inhibits LPS-induced production of TNF-alpha in isolated rat Kupffer cells and exerts hepatoprotective effects in mice.

AU Ishizaki-Koizumi Sonoko; Sonaka Ichiro; Takei Yoshiyuki; Ikejima Kenichi; Sato Nobuhiro

CS Pharmaceutical Research Laboratories, AJINOMOTO Co., Inc. 1-1, Suzuki-cho, Kawasaki-ku, Kawasaki 210-8681, Japan.. sonoko_ishizaki@ajinomoto.com

SO Biochemical and biophysical research communications, (2004 Sep 17) 322 (2) 514-9.
Journal code: 0372516. ISSN: 0006-291X.

CY United States

DT Journal; Article; (JOURNAL ARTICLE)

LA English

FS Priority Journals

EM 200410

ED Entered STN: 20040825
Last Updated on STN: 20041028
Entered Medline: 20041027

AB The activation of Kupffer cells represents a central mechanism of liver injury involving the production of TNF-alpha. It is known that glycine prevents LPS-induced production of TNF-alpha in isolated Kupffer cells. In this study, the possibility that glycine analogues might affect Kupffer cells was investigated. As a result, **aminomethanesulfonic acid** (AMS) inhibited the production of TNF-alpha in LPS-stimulated Kupffer cells. Furthermore, LPS treatment caused a transient increase in intracellular calcium ([Ca(2+)](i)) which was blunted by AMS. Thus, the addition of AMS is protective against the LPS-induced increase [Ca(2+)](i) and subsequent production of TNF-alpha. Moreover, in vivo studies demonstrated that pretreatment of mice with AMS increased the rate of survival after injection with LPS/d-gal and reduced the TNF-alpha serum level and the mRNA level in the liver. These results indicate that intake of AMS attenuates the LPS-induced hepatotoxicity resulting from activation of Kupffer cells.

CT Animals
Galactosamine: ME, metabolism
Galactosamine: TO, toxicity
Glycine: AA, analogs & derivatives
Glycine: ME, metabolism
*Kupffer Cells: ME, metabolism
Kupffer Cells: PA, pathology
*Lipopolysaccharides: ME, metabolism
Lipopolysaccharides: TO, toxicity
***Liver: ME, metabolism**
Liver: PA, pathology
Mice
Rats
*Sulfonic Acids: ME, metabolism
*Tumor Necrosis Factor-alpha: ME, metabolism

RN **13881-91-9 (aminomethanesulfonic acid)**; 56-40-6 (Glycine); 7535-00-4 (Galactosamine)

CN 0 (Lipopolysaccharides); 0 (Sulfonic Acids); 0 (Tumor Necrosis Factor-alpha)

L96 ANSWER 2 OF 2 MEDLINE on STN

AN 83163208 MEDLINE

DN PubMed ID: 6339682

TI Kinetics and mechanisms of the recombination of Zn2+, Co2+, and Ni2+ with the metal-depleted catalytic site of horse liver alcohol dehydrogenase.

AU Schneider G; Zeppezauer M

SO Journal of inorganic biochemistry, (1983 Feb) 18 (1) 59-69.
Journal code: 7905788. ISSN: 0162-0134.

CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198305
ED Entered STN: 19900318
Last Updated on STN: 19970203
Entered Medline: 19830527
AB The kinetics of the recombination of the metal-depleted active site of horse liver alcohol dehydrogenase (LADH) with metal ions have been studied over a range of pH and temperature. The formation rates were determined optically, by activity measurements, or by using the pH change during metal incorporation with a pH-indicator as monitor. The binding of Zn2+, Co2+, and Ni2+ ions occurs in a two-step process. The first step is a fast equilibrium reaction, characterized by an equilibrium constant K1. The spectroscopic and catalytic properties of the native or metal-substituted protein are recovered in a slow, monomolecular process with the rate constant k2. The rate constants k2 5.2 X 10(-2) sec-1 (Zn2+), 1.1 X 10(-3) sec-1 (Co2+), and 2 X 10(-4) sec-1 (Ni2+). The rate constants increase with increasing pH. Using temperature dependence, the activation parameters for the reaction with Co2+ and Ni2+ were determined. Activation energies of 51 +/- 2.5 kJ/mol (0.033 M N-Tris-(hydroxymethyl)methyl-2-**aminomethane sulfonic acid** (TES), pH 6, 9) for Co2+ and 48.5 +/- 4 kJ/mol (0.033 M TES, pH 7, 2) for Ni2+ at 23 degrees C were found. The correspondent activation entropies are - 146 +/- 10 kJ/mol K for Co2+ and - 163 +/- 9 kJ/mol K for Ni2+. Two protons are released during the binding of Zn2+ to H4Zn(n)2 LADH in the pH range 6.8-8.1. The binding of coenzyme, either reduced or oxidized, prevents completely the incorporation of metal ions, suggesting that the metal ions enter the catalytic site via the coenzyme binding domain and not through the hydrophobic substrate channel.
CT Alcohol Dehydrogenase
*Alcohol Oxidoreductases: ME, metabolism
Animals
*Cobalt: PD, pharmacology
Horses
Kinetics
***Liver: EN, enzymology**
*Nickel: PD, pharmacology
Protein Binding
Research Support, Non-U.S. Gov't
*Zinc: PD, pharmacology
RN 7440-02-0 (Nickel); 7440-48-4 (Cobalt); 7440-66-6 (Zinc)
CN EC 1.1 (Alcohol Oxidoreductases); EC 1.1.1.1 (Alcohol Dehydrogenase)

=> => d his

(FILE 'HOME' ENTERED AT 08:29:00 ON 05 JUL 2005)
SET COST OFF

FILE 'HCAPLUS' ENTERED AT 08:29:11 ON 05 JUL 2005
L1 1 S US20040058993/PN OR (US2003-601699# OR WO2001-JP11112 OR JP20
E AJINOMOTO/PA,CS
L2 9132 S E2-E4 OR AJINOMOTO?/PA,CS
E ISHIZAKI S/AU
L3 27 S E3,E4,E38
E SONOKO I/AU
E SONAKA I/AU
L4 26 S E3,E4

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                E ICHIRO S/AU
                E IINO Y/AU
L5           53 S E3,E29
                E YUKIO I/AU
                SEL RN L1

     FILE 'REGISTRY' ENTERED AT 08:31:56 ON 05 JUL 2005
L6            3 S E1-E3
L7              STR
L8            0 S L7 CSS
L9              STR L7
L10           0 S L9 CSS
L11           2 S L9
L12         414 S L9 CSS FUL
                SAV L12 KWON6016/A
L13             STR L9
L14          22 S L13 CSS SAM SUB=L12
L15         375 S L13 CSS FUL SUB=L12
                SAV L15 KWON6016A/A
L16             STR L13
L17          22 S L16 CSS FUL SUB=L15
                SAV L17 KWON6016B/A
L18          12 S L17 AND (WITH OR CONJUGATE OR PMS/CI OR NR>=1)
L19          10 S L17 NOT L18
L20          48 S L12 AND ESTER
L21          33 S L20 NOT PMS/CI
L22          15 S L21 AND NR>=1
L23          18 S L21 NOT L22
                SEL RN 7 8 13 14
L24          14 S L23 NOT E4-E7
L25         344 S L15 NOT L20
L26           1 S 107-35-7
L27         201 S 107-35-7/CRN
L28         159 S L25 NOT L26,L27
L29          16 S 56546-93-1 OR 56546-93-1/CRN
L30         143 S L28 NOT L29
L31           1 S 13881-91-9
L32          17 S 13881-91-9/CRN
L33           9 S L31,L32 NOT L19,L24
L34         125 S L30 NOT L31,L32
L35         117 S L34 NOT PMS/CI
L36         110 S L35 NOT (D OR T)/ELS
L37          34 S L36 AND NC>=2
L38          24 S L37 AND (NA OR CA OR LI OR K OR H3N OR AG)
L39          76 S L36 NOT L37
L40          70 S L39 NOT (11C# OR 13C# OR 14C# OR 35S# OR C11# OR C13# OR C14#
L41          69 S L40 NOT 15N

     FILE 'HCAPLUS' ENTERED AT 08:48:05 ON 05 JUL 2005
L42         874 S L19 OR L24 OR L38 OR L41
L43         158 S AMINOMETHANESULFONIC ACID
L44           1 S AMINOMETHANESULPHONIC ACID
L45          61 S AMINOMETHANESULFONATE OR AMINOMETHANESULPHONATE
L46         942 S L42-L45
L47           3 S L1-L5 AND L46
                E TUMOR NECROSIS FACTOR/CT
                E E4+ALL
                E E2+ALL
L48       56749 S E3,E4,E2+NT
L49       43523 S E22+OLD,NT,PFT,RT
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L50       13013 S E2 (L) ALPHA
L51       43379 S TNF(L)ALPHA
L52       43641 S TUMOR NECROSIS FACTOR (L) ALPHA
                E TNF
L53        3838 S E34-E84,E92,E93
L54           4 S L46 AND L48-L53
                E LIVER/CT
L55      354152 S E3-E62
                E E3+ALL
L56      393704 S E3-E10
                E E18+ALL
L57       93411 S E10+OLD,NT
                E E62+ALL
L58        4105 S E6+OLD,NT
L59          18 S L46 AND L55-L58
L60          19 S L47,L54,L59
L61          15 S L60 NOT L54
                E HEPAT/CT
L62       17982 S E66+OLD,NT,PFT,RT
L63        1535 S E97+OLD,NT,PFT,RT
L64       10725 S E115+OLD,NT,PFT,RT
L65        9854 S E126+OLD,NT,PFT,RT
L66         813 S E145+OLD,NT,PFT,RT
L67         543 S E147+OLD,NT,PFT,RT
L68         599 S E148+OLD,NT,PFT,RT OR E149+OLD,NT,PFT,RT OR E150+OLD,NT,PFT,R
L69        8062 S E159+OLD,NT,PFT,RT
L70        1266 S E220+OLD,NT,PFT,RT
L71           2 S E228
L72      392374 S E229+OLD,NT,PFT,RT OR E231 OR E232+OLD,NT,PFT,RT
L73      355974 S E246+OLD,NT,PFT,RT OR E252+OLD,NT,PFT,RT
                E E241+ALL
L74        1698 S E2
L75          13 S L46 AND L62-L74
L76           1 S L75 NOT L60
L77          20 S L60,L75
L78          15 S L77 AND (PY<=2001 OR PRY<=2001 OR AY<=2001)
L79          17 S L47,L78
L80          17 S L79 AND L77
L81           3 S L77 NOT L80
                SEL HIT RN L80

     FILE 'REGISTRY' ENTERED AT 09:07:00 ON 05 JUL 2005
L82           4 S E1-E4
L83           1 S L82 AND CH5NO3S
L84           1 S L41 AND CH4NO3S
L85           0 S 7390-03-5/CRN
L86          10 S L19,L83,L84

     FILE 'HCAPLUS' ENTERED AT 09:09:45 ON 05 JUL 2005
L87         272 S L86
L88           7 S L87 AND L77
L89           7 S L88 AND L80

     FILE 'REGISTRY' ENTERED AT 09:10:32 ON 05 JUL 2005

     FILE 'HCAPLUS' ENTERED AT 09:11:10 ON 05 JUL 2005

     FILE 'MEDLINE' ENTERED AT 09:12:01 ON 05 JUL 2005
L90           7 S L86
L91          23 S L43 OR L44 OR L45
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L92           2 S AMINO()(METHANESULFONATE OR METHANESULPHONATE OR METHANE()(SU
L93           0 S AMINO()(METHANESULFONIC OR METHANESULPHONIC OR METHANE()(SULF
L94           8 S AMINOMETHANE()(SULFONATE OR SULPHONATE OR (SULFONIC OR SULPHO
L95          31 S L90-L94
L96           2 S L95 AND LIVER+NT/CT
L97           0 S L95 AND LIVER DISEASES+NT/CT
                E HEPAT/CT
                E E72+ALL
L98           0 S L95 AND E2+NT
                E HEPATIC DUCT/CT
L99           0 S L95 AND E36+NT
L100          0 S L95 AND E139+NT
L101          0 S L95 AND E169+NT
L102          0 S L95 AND E210+NT
L103          0 S L95 AND E212+NT
L104          0 S L95 AND E221+NT
L105          0 S L95 AND E228+NT
L106          0 S L95 AND E243+NT
L107          0 S L95 AND E246+NT
L108          0 S L95 AND E312+NT
L109          0 S L95 AND E331+NT
L110          0 S L95 AND E343+NT
L111          0 S L95 AND E344+NT
L112          0 S L95 AND E369+NT
L113          0 S L95 AND E400+NT
L114          0 S L95 AND E420+NT
L115          0 S L95 AND E442+NT
L116          0 S L95 AND E470+NT
L117          0 S L95 AND E493+NT
L118          0 S L95 AND E495+NT
L119          0 S L95 AND E619+NT
L120          0 S L95 AND E620+NT
L121          0 S L95 AND E639+NT
L122          0 S L95 AND E735+NT
L123          0 S L95 AND E788+NT
L124          0 S L95 AND E797+NT
L125          0 S L95 AND E813+NT
L126          0 S L95 AND E814+NT
L127          0 S L95 AND E878+NT
L128          0 S L95 AND E903+NT
L129          0 S L95 AND E933+NT
L130          0 S L95 AND E963+NT
L131          0 S L95 AND E992+NT

     FILE 'MEDLINE' ENTERED AT 09:22:25 ON 05 JUL 2005
                E TUMOR NECROSIS FACTOR/CT
                E E4+ALL
                E E2+ALL
L132      51535 S E64+NT
L133          1 S L95 AND L132
L134          0 S L133 NOT L96

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